



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,509	06/23/2003	Robert C. Glenn	P15920	9730

28062 7590 03/20/2006

BUCKLEY, MASCHOFF, TALWALKAR LLC  
5 ELM STREET  
NEW CANAAN, CT 06840

EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT PAPER NUMBER

2835

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

31/

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/601,509	GLENN, ROBERT C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Rutland-Wallis	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,3-7 and 12 is/are rejected.
- 7) ☐ Claim(s) 8-11 and 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

The previous 112 2<sup>nd</sup> paragraph rejections with respect to claims 13, 14 and 16 has been withdrawn based on Applicant's amendment.

Applicant points out claim 13 contains the imprecise limitation "negligibly", the office acknowledges "negligibly" is not a precise term, further the office agrees it does provide a definite scope and one of ordinary skill in the art would understand the meets and bounds of said newly added limitation.

Applicant's arguments, with respect to claims 1-11 have been fully considered and are persuasive. The previous 102 and 103 rejections to claims 1-11 have been withdrawn.

Applicant alleges on page 4 of the remarks under the heading Claim Objections "no other objections or rejections were presented with respect to claim 12". The examiner directs Applicant to page 7 of the previous office action to find the rejection to claim 12. As no arguments are presented to the rejection of claim 12 nor does it contain the allowable subject matter of claim 1 the rejection to claim 12 has not been withdrawn.

### ***Double Patenting***

A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 3-7 of the instant application are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Glenn U.S. Patent No. 6,882,064.

With respect to claim 1 both the instant application and claim 1 of patent 6,882,064 recite, the same limitations with the exception of claim 1 of the instant

Art Unit: 2835

application recites "a plurality of control circuits each of the plurality of the control circuits coupled to a respective one of the plurality of the plurality of capacitor switches to generate a respective control voltage, and" is used in the place of "one or more biasing circuits" and in the last lines of claim 1 of the instant application "a plurality of sets" is added before the description of the control biasing circuits. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the plurality of control circuits in the place of the one or more biasing circuits and to add additional sets of control biasing circuits, since it is held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With respect to claim 3 both instant application and claim 1 of patent 6,882,064 recite, the same limitations except the word output is added in line 2 of claim 3 of the instant application. The addition of the word output does not provide any patentable distinction.

With respect to claim 4 both instant application and claim 4 of patent 6,882,064 recite, the same limitations except the word signal is used where patent 6,882,064 uses the word current and the instant application refer to "a plurality of control circuits" instead of a control circuit, since it is held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With respect to claims 5-7 both instant application and claim 5 of patent 6,882,064 recite, the same limitations.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welland et al. (U.S. Pat. No. 6,574,288) in view of El-Hamamsy et al. (U.S. Pat. No. 5,600,187)

Welland teaches a method of setting a plurality of control circuits (control circuitry item 502 contains a plurality of control circuits items 812 and 804 for example) and a plurality of capacitor switches (Fig. 7 items S0-Sn) to a reset voltage (item 816 reset signal); coupling a first of the plurality of control circuits to a control signal (item 506 may be considered a control signal), the first control circuit coupled to a first of the plurality of capacitor switches; wherein the first threshold voltage is less than the reset voltage; and uncoupling the first control circuit from the control signal. While Welland teaches item 812 may adjust the capacitance see column 17 lines 50-55, Welland does not clearly teach or disclose the series of capacitors and capacitor switches configured as claimed or determining that a control voltage of the first control circuit is less than a first threshold voltage. El-Hamamsy teaches a variable capacitor comprising a series capacitance connected in series with a transistor and further comprising control circuits for controlling a control voltage to the transistor, which is less than a threshold voltage.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the circuit of Welland to include a control circuitry and series capacitors and capacitor switches as taught by El-Hamamsy in order to provide a means for varying the amount of capacitance of the system by applying the different bias levels to the gate of each transistor.

### ***Allowable Subject Matter***

Claims 1 and 3-7 are objected to as being rejected based on nonstatutory double patenting, but would be allowable if a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) is used to overcome the double patenting rejection to claims 1 and 3-7. The following is a statement of reasons for the indication of allowable subject matter: Dingwall neither alone or in combination with Welland teach a plurality of sets of control biasing circuits where each of the plurality of sets of one or more control biasing circuits to set a respective control voltage to one of a rest voltage a first voltage and a second threshold voltage. Theses further limitations to claim 1 are not taught or rendered obvious by the prior art.

Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Dingwall neither alone or in combination with Welland teach a plurality of sets of control biasing circuits where each of the plurality of

sets of one or more control biasing circuits to set a respective control voltage to one of a rest voltage a first voltage and a second threshold voltage. Theses further limitations to claim 1 are not taught or rendered obvious by the prior art.

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Dingwall neither alone or in combination with Welland teach a detector, the detector to transmit a difference signal to the charge pump, the difference signal to indicate a difference between a reference signal and an output signal, wherein the output signal is based on one or more of the plurality of capacitors, and wherein the charge pump is to generate the control signal based on the difference signal. Theses further limitations to claims 4 and 10 are not taught or rendered obvious by the prior art.

Claim 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: El-Hamamsy teaches a method according to wherein each of the capacitor switches is coupled in series to a respective one of a plurality of capacitors see Fig. 3 of 4 of El-Hamamsy, however neither El-Hamamsy or Welland teach or render obvious the further limitation to claim 12 of a capacitor which coupled to the first capacitor switch contributes negligibly to a total capacitance of the



Art Unit: 2835

plurality of capacitors if the first control circuit is set to the first threshold voltage. This further limitation to claim 12 is not taught or rendered obvious by the prior art.

Claims 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: while Welland as modified by El- Hamamsy further in view of Sandstedt do teach a second plurality of control circuits. Dingwall teaches multiple pluralities of control circuits in order to control additional components as seen in Dingwall (Fig. 7). However it is not believed a proper motivation to combine Dingwall with the combination of Welland as modified by El- Hamamsy, hence the further limitation to claim 12 is not rendered obvious by the prior art.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okada et al. (U.S. Pat. No. 5,960,898) teaches a parallel configured capacitance control system and Welland (U.S. Pat. No. 6,137,372) teaches a similar device to that of claim 1 and claim 8.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2835

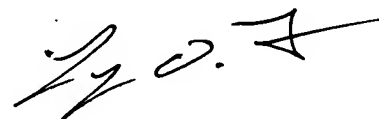
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MRW



LYNN FEILD  
SUPERVISOR OF PATENT EXAMINER  
TECHNOLOGY CENTER 2800  
LYNN FEILD

SUPER  
TE